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March 31, 2004

Eric Newman
6450 Cecil Avenue
St. Louis, MO 63105

Dear Eric:

Enclosed you will find the paper that I discussed with you concerning the Die Interlock Chart for Virginia Colonial Coins. I would appreciate your critical review of this paper and your consideration for becoming a co-author. The paper is essentially an overview that provides photos of the 4 new varieties that have been discovered since your 1962 paper. As I have stated previously, the Die Interlock Chart is based on the number of harp strings. I do review Veach's theory concerning the relationship of the minting and the number of harp strings, but indicate that there is no proof of this.

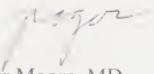
The major purpose of this paper is to start bringing awareness of the Virginia colonial coin to colonial collectors once again. By indicating that an attribution guide will be forthcoming, perhaps more people will start collecting these coins by variety. You will note that I did invite Alan Anthony to be a co-author of the paper and have sent revisions to him as they have occurred. I hope that he will respond in the near future concerning any changes that he might like to see made.

In regard to the Royal Mint Museum, I have attempted to contact them to arrange for a time that I might be able to travel to photograph the Virginia matrix, two punches, and the die. Any help you can give me in getting introductions with the new master of the Royal Mint Museum would be much appreciated.

If you accept co-authorship on this paper, I will move your name from the acknowledgment section to the authorship line. My time-line on submitting this is within the next month, unless other new varieties become available for study. I would think that any collector of these Virginians would have come to you with a new variety since you are the expert in this

field. If you know of any other varieties, other than those that I have mentioned in this paper, please let me know so that they can be added to the Die Interlock Chart.

Best regards,



Roger Moore, MD

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e-mail: [REDACTED]

RAM:ch
Enclosure

Comments

My Middle initial is desirable EPN.

Over 100 Va Yds were found at Williamsburg p 40 ²²
₁₉₆₂

The die with 9 strings is not mentioned on p 2.

"argue" is a bad word on p 2. It should
say a choice

The org of Beach is dreamland p 2

decrease his identification for die is ridiculous p 7

Putting of new head of Geotl is ridiculous p 7

Use of AA instead of an open lattice container may

and should be eliminated

Opposition on p 8 is incorrect.

1200 combinations is ridiculous p 8

"retirement" is inaccurate p 9

1200 combinations repeated p 10

repetition in the conclusion

"little interest" is a bad word choice p 10

As to Die Relationships clear?

Alone Z after Y and drop B down to
that level.

* for "no period" is dumb. The * should be
for those with period. Use a ~~B~~ small O or big dot -

7 string bag is left out of chart ^{completely} to after N.

GOP combination should be dropped to after N.

X should be put before Y in chart and
drop others down

Tentative
comment.

EPK
4/3/04

Subj: **Moore's Draft on Virginia Coinage**
Date: 04/03/2004 8:13:33 PM Central Standard Time
From: EricNumis
To: Vacoinalge

Dear Alan:

I just received a 3/31/04 letter from Dr. Roger Moore enclosing a draft of an article on Virginia halfpence which he expects to submit for publication in a month. He has asked me to make suggestions and also asks if I want to be a coauthor. He indicates that he asked you also to be a coauthor but says he has not heard from you for a while. He is overwhelmingly and intensely enthusiastic about the subject. There have been many Emails between members of the group on the subject. I have responded to only a few.

I realize that you have written drafts of an article of your own.

It is not easy for anything to be done by committee and sometimes feathers may be ruffled. I will not put my name on anything I do not participate in but I have furnished a reasonable amount of material to you, to him, etc. Then there is a problem of putting one's name on something you do not agree with.

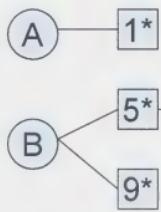
Would you want to tell me how you feel about the matter? If you are happy or unhappy, satisfied or dissatisfied, feel trampled upon, too busy with other matters or whatever I will understand. If you only want me to leave you alone then give me a hint or tell me "NO COMMENT".

I feel that I should send you this message so I can try to help clear up anything which can be helpful to numismatic research.

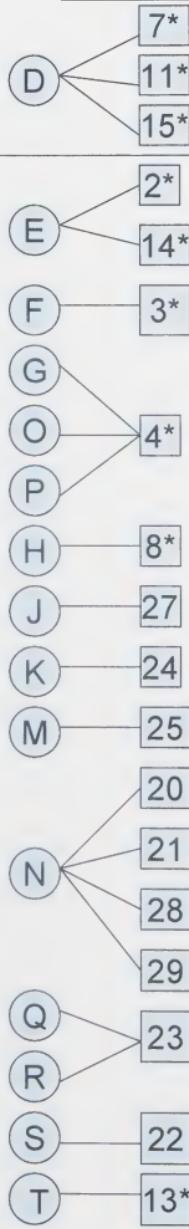
Eric

COLONIAL VIRGINIA DIE RELATIONSHIPS

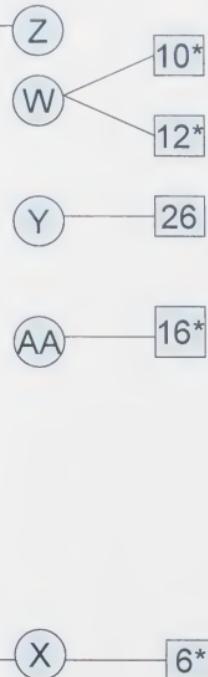
6 HARP STRINGS



7 HARP STRINGS



8 HARP STRINGS



(○) — REVERSES

(□) — OBVERSES

* — NO PERIOD

DIE INTERLOCK CHART FOR VIRGINIA COLONIAL COINS

Roger Moore M.D. and Alan Anthony

Introduction – Though authorization for coinage by the Virginia colony was provided by the British Crown in the original Virginia Charter of April 10, 1606 (1), actual minting of coins did not occur until 1773. The multiple causes for the delay in initiating the minting of a Virginia coinage, and its introduction into colonial circulation, is a study of colonial bureaucracy and is described in excellent detail by Eric Newman in his classic work of Virginia colonial coinage (1). In essence due to increasing pressure from tradesmen and citizens in need of copper coins for the conductance of business and trade, the Virginia House of Burgesses on December 20, 1769, passed an act allowing the treasurer, Robert Carter Nicholas, to purchase 2500 pound sterling worth of English copper coin. Mr. Nicholas enlisted the aid of John Norton & Sons in London to see to the details of the requested coinage. However, minting did not begin immediately, as further modifications concerning the coinage were worked out, including the valuation of the new copper coinage at 60 coins per pound avoirdupois (116.7 grains per coin). In fact these considerations continued until 1772, when the final design for the coinage was agreed upon and application was made to the Tower Mint to undertake the coinage. On March 22, 1773 the mint finally recommended to the Crown that the coinage be made, and on May 20, 1773, the Crown by Royal Warrant authorized that up to 25 tons of coins be minted. By August 1st 1773 the minting had still not commenced, since the dies were in the process of being made; but soon after that date, minting proceeded with the production of

five tons of Virginia coins (672,000 coins). They arrived in Virginia on February 14, 1774, but bureaucracy one again intervened and the coins were not released into general circulation until March 1775 – some 50 days prior to the start of the Revolutionary War. The coins did circulate to a limited extent, though many may have been diverted to the melting furnaces to supply copper for the war. The continued discovery of these coins by metal detectors [reports exist from Virginia (2), New York (3), New Jersey (4), Pennsylvania (5), Maryland (5), and Tennessee (5)], as well as during archeological excavations [particularly at Colonial Williamsburg, VA where they were first distributed in America and where at least 40 Virginia coins have been found (6)], would indicate that some circulation throughout the 13 colonies did occur.

Dies and Minting: - An in depth evaluation of the Royal Mint records by Graham Dyer and Peter Gaspar (7) have provided the important information that 40 obverse Virginia dies and 30 reverse dies were produced by the Tower Mint for production of the Virginia coinage. The obverses can be readily divided into two groups by the presence or absence of a period following GEORGIVS in the legend. Similarly, the reverses can be readily divided into three groups based on the presence of 6, 7, or 8 harp strings in the shield's harp. Dyer and Gaspar photographed an obverse matrix, which is still in existence in the Tower Mint, which shows no legends – only the central head of King George III (7). An obverse punch that also still exists, similarly lacks any legend elements. A reverse piece, which they argue might be a matrix, rather than a die, contains

both legends and a harp with 9 strings. An existing punch for the reverse, on the other hand, shows only the shield and crown without legends and a number of elements are missing from the shield, including the harp strings, the two lions over each other, the three lions over each other, and the decorations surrounding the rearing lion. There is not universal agreement that the reverse piece does represent a matrix , rather than a die (8), and the authors agree that the reverse piece is more die-like than matrix-like. How the numerous dies were utilized and in what order is not known. However, William Veach in his, "The Generations Newsletter" (9), theorized that the minting sequence of the Virginia coins was in the order of the number of harp strings in the shield. He considered the pattern 6-stringed harp reverse used to make the rare large planchet 1-A variety to have been minted in June (though minting had supposedly not commenced until at least August 1st 1773). William Veach theorized,

"... during July, 1773, while the Mintmaster (sic) was awaiting the late arrival of the small planchet cutter ordered specifically to produce the Virginia copper Halfpenny, the die maker went ahead and produced the remaining number of Obverse and 7-string harp Reverse dies that he must have felt were going to be adequate to finish the job, as provided in the King's Warrant."

Veach continued,

"...production began approximately in early August. However, as the month went by and die problems resulted in low mintage levels for many 7-string harp Reverse sets, it became necessary to create additional dies, including 8-string Reverses, in late August, 1773. These dies were utilized on into September, 1773, when the 9-string harp reverse was created and was ready, but never used to mint a single coin. Instead the Mint master decided to reuse a Reverse that had been retired early on and it struck enough coinage to complete the entire contracted 5 tons."

Though Veach's theory has no proof, it has an internal consistency that is appealing. An alternative explanation for the different number of harp strings is that each die sinker would often identify his work with some small difference in the dies that he made. The use of a different number of harp strings would be one way to make this distinction in a subtle manner (8). Possibly the obverse could have been differentiated with the absence or presence of a period after GEORGIVS, though this would presuppose that only two die makers were involved in making the obverses. Whatever, the actual situation, Veach's argument for a returned usage of an earlier retired die would explain one of the primary aberrations revealed in the provided die interlock chart – the use of the 5 obverse with both a 6-harp string reverse (the B reverse) and an 8-harp string reverse (the Z reverse). One question which would need to be answered, if the increasing harp sting number is found to be related are to the minting sequence, is whether the 5 obverse or the B reverse was the die that was brought back into

service after it's initial usage. In the die chart offered, the presumption is that the 5-B die pairing was first, with the 5 die reused at a later date to produce the 5-Z pairing. (see Table 1). In spite of uncertainty as to the real reason for the different numbers of harp strings, there is no question of the consistency in the coinage emitted from the Tower Mint. Jim Spilman's paper concerning the weight distribution of the Fugio cents also provides us an important look at the Virginia coinage (10). What is shown in this study, which evaluated the weights of 32 mint state specimens of Virginia coinage, is an average weight of 115.74 grains, as compared to the authorized weight of 116.7 grains. In addition, the standard deviation was only 5.49. This argues for a high level of consistency in the copper rolling and planchet punching process. Another observation is that few of the Virginia die varieties show progressive die deterioration. In part this is due to the high standards of the Tower Mint in early retirement of dies showing any deterioration (8, 11, 12). However, a few examples do exist of Virginia coinage showing progressive die deterioration (10 obverse and P reverse) but these examples are comparatively infrequent.

New Dies since Newman: Since the classic paper by Eric Newman in 1956 (1) and his update on newly discovered die varieties in 1962 (12), little has been written about Virginia coinage. However, a number of new die varieties have been discovered (13, 14, 15). In addition a number of possible new die varieties have been reported but on reevaluation have not been substantiated (16, 17). Of

interest, a recent auction sale included the combination of both an obverse and a reverse die that have not been described previously (18).

For the "with period" obverse variety, two new dies are now known. The first was discovered by Robert Vlack and appeared in the March 1976 sale of his Virginia coins – one of the most complete sales of a series of attributed Virginia coins (13). Lot # 108 in this sale was a "with period" new obverse called a 28 by Vlack, which was paired with an N reverse (see Figure 1). The 28 obverse is very similar to the 27 obverse with the key difference being the positioning of the period after the "X" in REX slightly closer to the curl of hair.

A second new "with period" die was discovered by Mike Ringo and appeared in the 1998 C-4 auction catalog as lot # 91, and described as an "unlisted variety" (14). (see figure # 2) The obverse is a new die and is very similar to the 21 obverse. However, the reverse is a 7 harp string variety which was also paired with the other new "with period" obverse variety previously described – an N. Since the sequence of "with period" obverses stopped with 28, it is logical to designate this new obverse as 29. This has been done in the die interlock chart. (see Table 1)

Some new "no period" obverses have also been found. First described in the 59th sale by New Netherlands in June of 1967 as lot # 1060 (15), and more recently sold in the 1996 C-4 auction as lot # 179 (19), the 14 obverse is both well described and plated. (see Figure 3) As a "no period" variety, it was logical

that the next empty position in the sequence was used – the 14. One interesting observation is the legends in the 14 obverse are very similar to the legends on the 15 obverse in regard to positioning. However, the head of George III is very different. A possibility exists that the 14 die, after showing significant wear or becoming damaged, might have been re-punched with a larger George III head to make the die used to produce the 15 obverse. A more in dept evaluation will be required to better define this possibility, including image overlay studies. The authors have elected to continue with the 14 designation in our die interlock chart.

The most recent “no period” obverse was sold in the January 2004 Heritage Auction, # 342, as lot # 5003. (18). The obverse is similar to the 14 but the S in GEORGIVS is placed closer to the hair (see Figure 4). Of interest, this coin also has the first new reverse described since Eric Newman’s studies. The reverse is a new 8 harp string variety (see figure # 4). All the alphabet between D and T (with the exception of I and L) is presently being used to describe the seven harp string reverses and the U designation which is as yet unassigned, falls immediately after the last described seven harp string variety (T). Therefore, the new harp string reverse could have utilized one of the unused letters that are to better associated with the seven harp string varieties (20), or assigned a non-capital letter designation or with be designated with double letters. Based on communication with Jim Spilman, the authors elected to use the AA designation for this new reverse (21). (see Figure # 4).

The described coins are the only new Virginia die varieties known to the authors. There may be many others but until they are brought forth for examination, they will not be added to the official die listing. An article did appear in the fall of 2002 C-4 Newsletter describing what was thought to have been a new variety, called a 10-C (16), but on re-examination, the coin was reattributed as a 13-T. Similarly, a number of coins have been offered to the Virginia e-Group as possible new varieties but each has been identified as an existing variety (17).

Die Interlock Chart: A die interlock chart was developed for the Virginia coinage, based on the number of harp strings in the reverse die (see Table 1). At this time there are 23 known obverses and 26 reverses producing a total of 32 known die combinations. However, based on the 40 obverse and 30 reverse dies produced, some 1200 die combinations are possible. The reason more die combinations are not known, as shown by the die interlock chart, is most Virginia coins have a single pairing of one obverse with one reverse. There is some die sharing within the reverses containing 6 harp strings (1 reverse variety (B) with two obverses (5 and 9)). Similarly, there is die sharing within the 7 harp string group (D reverse with 7, 11, and 15 obverses, as well as reverse N with 20, 21, 28, and 29 obverses. In addition, the 4 obverse is shared with the G, O, and P reverses and the 23 obverse is shared with the Q and R reverses). In the 8 harp string group the W reverse is shared with the 10 and 12 obverses and two 8 harp string reverses (V and X) share two obverse dies that also are paired with 7 harp

string reverses. The only variety that crosses between the 6 and 8 harp string barrier is the 5 obverse. This unusual matching could be explained by Veach's theory that the 5 obverse was used late in the minting process combined with the Z reverse (8 harp strings). Due to an early unanticipated die breakdown of the Z reverse, the B reverse was taken out of retirement and used with the 5 obverse. Alternatively, the 5 obverse could have been the early die that was initially paired with another early die, the B reverse (6 harp strings), and retired after striking the 5-Bs. However, after a few months another obverse die was needed to finish the mint run, and the 5 obverse was brought back into service paired with the Z reverse (8 harp strings). Though there is no proof for either sequence, proper substantiation may be provided with an analysis of differing die states of the 5-B and 5-Z coins. Unfortunately, few high condition 5-B and 5-Z varieties are presently available for inspection. As previously indicated, die analysis is confounded by the Tower Mint's propensity for early retirement of dies showing any wear (12). The presented die chart presumes that the 5 obverse was an early die.

The most striking finding, other than the sharing of the 5 obverse with both a 6 and an 8 harp string reverse, is the limited amount of die sharing that was used. Of the 49 combined obverse and reverse dies that are presently known, 30 are used only in combination with one other die. Four reverses are paired with only two obverse dies, one reverse is paired with three obverse dies and one reverse is paired with four obverse dies. Similarly, four obverses are paired with only two

reverse dies and one is paired with three. It would seem that when one die of a die pair began showing wear, the Tower minters would typically take both the obverse and reverse dies out of usage.

Conclusion: A total of 40 obverse dies and 30 reverse dies were made to produce the Virginia coinage. Combining these dies, one could expect to produce as many as 1200 different die combinations. However, only 32 die combinations are presently known, produced from 23 obverse and 26 reverse dies. One reason for the low number of known die combinations is the seeming preference by the Tower Mint for using a die pair only in combination with one another. Some intra-die sharing within each of the 6, 7, and 8 harp string groups does occur and to a lesser extent inter-die sharing between the 7 and 8 harp string groups. Only one die (the 5 obverse) is paired with both a 6 and an 8 harp string reverse. Further study of high condition specimens allowing an evaluation of die deterioration is needed in order to determine the reason for this aberration.

Request: The Virginia coinage has engendered little interest among the colonial coin collecting community. Part of this lack of interest is due to the difficulty in attributing the coinage based on available photographic plates. Rumors exist concerning a number of die varieties not listed in the present die chart, including a "L-1" reverse. The authors of this paper are in the process of preparing an attribution guide for Virginia colonial coinage. We would greatly appreciate any help the CNL readership could supply in bringing to light unknown varieties.

Though we realize that new varieties of the Virginia coinage are bound to be discovered, especially as more of these coins are attributed, we would like to have our attribution guide as complete as possible in the first edition. Anyone contributing to this effort will receive acknowledgement, unless requested otherwise. Similarly, if requested, strict confidentiality will be afforded to those who help. Contact for any new varieties should be directed to the email address:

[REDACTED] Since an ongoing record of all Virginia coins is being made with condition census data, any information about known varieties that include, the variety, the weight, and the pedigree, would also be appreciated.

Acknowledgement: Appreciation is given to Gary Trudgen and John Kleeberg for their critical review and suggested changes in this paper. In addition, the paper would not have been written without the leadership and persistence of Jim Spilman in putting interested people together on the internet for discussion and exchange of ideas within the Colonial Newsletter Foundation electronic Special Interest Group on Virginia Halfpence of 1773. Finally, Eric Newman needs to be thanked for being far ahead of his time in his study and exploration of the incredibly elusive and difficult Virginia coinage.

REFERENCES:

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- 3) Wayne Shelby, Survey of Colonial Coins Recovered In Southern New Jersey, *The C4 Newsletter*, Winter 2003, Vol. 11, No. 4, pp.7-40.
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- 5) John Kleeberg, Private email communication with Roger Moore on 3-28-2004.
- 6) The Notre Dame Colonial Coin web site on Virginia coinage,
<http://www.coins.nd.edu/ColCoin/ColCoinIntros/VA-halfd.intro.html>.
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- 9) Veach, William, The Generation Newsletter, Vol. 1 Issue 02, Sept. 1990.
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- 12) Newman, Eric, Additions to Coinage for Colonial Virginia, *Museum Notes X*, The American Numismatic Society, New York, 1962, pp. 137-143.
- 13) New England Rare Coin Auction, March 1976, lot # 108, 28-N from the Vlack collection.
- 14) C-4 Auction Catalog November 21, 1998 Lot # 91, 29-N from the Ringo collection.
- 15) New Netherlands 59th Auction sale, 6/1967, lot 1060, 14-E discovery coin.
- 16) Mark Kleinman, "Virginia No Period Halfpenny, Seven Harpstrings: Newman 10C?", *The C-4 Newsletter*, Fall 2002, Vol. 10, No. 3, pp.14-16.
- 17) Virginia eSIG – Private internet group developed by the Colonial Newsletter Foundation under the direction of Jim Spilman to foster academic exchange on Virginia coinage. Virginia section is moderated by Roger Moore. A number of coins were submitted as possible new varieties but were attributed as existing varieties.
- 18) Heritage Auction January 31, 2004 Long Beach Signature Sale # 342 lot # 5003, The first appearance of the new "no period" 16 obverse combined with the new 8 harp string AA reverse.
- 19) C-4 Auction Catalog October 12, 1996 lot # 179, 14-E resold.
- 20) Eric Newman – personal communication to Roger Moore by email on 3/26/2004.
- 21) James Spilman – private communication to Virginia e-group by email 2-20-2004.

FIGURE 4



16-AA



16-AA

FIGURE 3



14

FIGURE 2



29

FIGURE 1



28